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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,660	03/05/2002	Bruce Hoff	30499158v1	7234

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EXAMINER

ZEMAN, MARY K

ART UNIT PAPER NUMBER

1631

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/091,660	<b>Applicant(s)</b> HOFF, BRUCE	
	<b>Examiner</b> Mary K. Zeman	<b>Art Unit</b> 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 2,5,8,11,14,17,20,23,26,29,32,35,38,41 and 44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-45 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/6/04</u> . | 6) <input checked="" type="checkbox"/> Other: <u>From Table of Content</u>              |

### **DETAILED ACTION**

Applicant's election of Group B in the reply filed on 12/2/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, and 44 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/2/05.

Claims 1, 3-4, 6-7, 9-10, 12-13, 15-16, 18-19, 21-22, 24-25, 27-28, 30-31, 33-34, 36-37, 39-40, 42, 43 and 45 are examined herein.

### ***Information Disclosure Statement***

The response to the Requirement for Information has been entered. Applicant is reminded of the relevant portion of MPEP609 regarding CD-Rom submission of IDS documents: MPEP 609.04(a): "Electronic means or medium for filing IDSs are not permitted except for: (A) citations to U.S. patents and U.S. patent application publications in an IDS filed via the Office's Electronic Filing System (EFS) (see MPEP § 609.07); or (B) a compact disc (CD) that has tables, sequence listings, or program listings included in a paper IDS in compliance with 37 CFR 1.52(e). **A CD cannot be used to submit an IDS listing or copies of the documents cited in the IDS.**" Therefore, the references submitted on CD-Rom have been lined through on the IDS.

The information disclosure statement filed 12/6/04 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. The following references have not been considered: SAS Procedure(Reference Z); Herrero( Reference Y); Eisen (Reference Z2).

### ***Drawings***

The drawings were received on 3/5/02. These drawings are acceptable to the examiner.

*Compact Disc Submission*

This application is objected to because it contains a data file on CD-ROM/CD-R, however, the transmittal letter does not list for each compact disc, the machine format, the operating system compatibility, a list of files contained on the compact disc including their names, sizes in bytes, and dates of creation, plus any other special information that is necessary to identify, maintain, and interpret the information on the compact disc as required by 37 CFR 1.52(e)(3). A statement listing the required information is required. The information attempting to be submitted is not appropriate for a CD-ROM as set forth in the objection to the IDS above.

This application contains a data file on CD-ROM/CD-R that is not in an ASCII file format. See 37 CFR 1.52(e). File \*.pdf is not in an ASCII format. The information attempting to be submitted is not appropriate for a CD-ROM as set forth in the objection to the IDS above.

Applicant is further directed to 37CFR1.52(e) for rules regarding CD-ROM submissions.

*Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-4, 6-7, 9-10, 12-13, 15-16, 28, 30-31, 33-34, 36-37, 39-40, 42, 43 and 45 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 3-4, 6-7, 9-10, 12-13, 15-16, 28, 30-31, 33-34, 36-37, 39-40, 42, 43 and 45 recite various “means for” or “modules for” clauses. The means for executing each of the recited steps lack specific related structures in the specification. No specific computer, apparatus, system or program structures for performing these means are disclosed. In the response to the requirement for information filed 8/30/05, Applicant points to “at least paragraph 30” as basis for each means limitation. Paragraph 30 does not provide any structures or specific related structures for performing the recited means. Paragraph 33 recites a block diagram which

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lacks specificity and description of the various means recited therein. This paragraph does not disclose means for executing the steps recited, for example, in claim 1. This is not a written description of “means for” as required. See MPEP 2181: 35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language “shall be construed to cover the corresponding structure...described in the specification and equivalents thereof.” “If one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.” *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc)... Whether a claim reciting an element in means- (or step-) plus-function language fails to comply with 35 U.S.C. 112, second paragraph, because the specification does not disclose adequate structure (or material or acts) for performing the recited function is closely related to the question of whether the specification meets the description requirement in 35 U.S.C. 112, first paragraph. See *In re Noll*, 545 F.2d 141, 149, 191 USPQ 721, 727 (CCPA 1976) (unless the means-plus-function language is itself unclear, a claim limitation written in means-plus- function language meets the definiteness requirement in 35 U.S.C. 112, second paragraph, so long as the specification meets the written description requirement in 35 U.S.C. 112, first paragraph)... the invocation of 35 U.S.C. 112, sixth paragraph, does not exempt an applicant from compliance with 35 U.S.C. 112, first and second paragraphs. See *Donaldson*, 16 F.3d at 1195, 29 USPQ2d at 1850; *Knowlton*, 481 F.2d at 1366, 178 USPQ at 493.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-4, 6-7, 9-10, 12-13, 15-16, 18-19, 21-22, 24-25, 27-28, 30-31, 33-34, 36-37, 39-40, 42, 43 and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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As set forth above, claims 1, 3-4, 6-7, 9-10, 12-13, 15-16, 28, 30-31, 33-34, 36-37, 39-40, 42, 43 and 45 recite various “means for” and “modules for” clauses. The specification as filed does not set forth specific structures for performing the means recited. The means for executing the specific steps of the claims all lack specific related structures in the specification. See MPEP 2181: 35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language “shall be construed to cover the corresponding structure...described in the specification and equivalents thereof.” “If one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.” *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc). One of skill in the art would not necessarily be apprised of the specific structures to be used in the claimed apparatus.

In the method claims (19, 21-22, 24-25, 27) the metes and bounds of the claims are unclear. The preamble states that the claims are drawn to methods, “on a computer system” which comprises varying parts. It is unclear if Applicant is claiming a product or a process. The combination of statutory categories renders the scope of the claim unclear.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, 6-7, 10, 12-13, 15-16, 19, 21-22, 24-25, 27-28, 30-31, 33-34, 36-37, 39-40, 42, 43 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Genesight, 1999, Reference AA, PTO-1449).

Claim 1 is drawn to an apparatus which comprises a computer, input and output, memory and processors. The memory and processors have means for 1) receiving data having

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characteristics, 2) producing a one dimensional ordering of the data, 3) configuring a dendrogram of the data through iterative splitting, and 4) outputting the ordering and configuration of the dendrogram. The elected dependent claims comprise limitations to how the data is split or organized, such as “within group variance” “self organizing map” and “principal component analysis.” Claim 19 is a method of organizing the data comprising the same steps as recited in claim 1. Claim 28 is drawn to a computer program product for performing the method.

Genesight, 1999 (version 1.0, published 6/30/1998 according to the response to the requirement for information) discloses an apparatus, program product and method for analyzing gene data. Data is received (pages 7-9) and the data has various characteristics, such as signal value, name, etc. The program then produces a one dimensional ordering of the data. (alphabetical listing of files, standardized Euclidean distance which assess variance of quality of data, hierarchical clustering, p25, Ward’s method p27) The data is split and clustered based on varying requirements, such as single linkage, complete linkage each of which use a single aspect of the data (p27). After the splitting of the data, a dendrogram is generated and displayed. The dendrogram can plot only the clustering, or gene clustering and experiment clustering. The ordered data can also be output. This document discloses use of self organizing maps to cluster the data at page 30. Principal component analysis module of the data at page 34. As such, this anticipates the rejected claims.

Claims 1, 3-4, 6-7, 10, 12-13, 15-16, 19, 21-22, 24-25, 27-28, 30-31, 33-34, 36-37, 39-40, 42, 43 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Genesight, 2.0/2.1, 12/14/2000, Reference BB, PTO-1449).

Genesight, 2001 (version 2.0 or 2.1, published 12/14/2000 according to the response to the requirement for information) discloses an apparatus, program product and method for analyzing gene data. Data is received (chapters 5-6) and the data has various characteristics, such as signal value, name, etc. The Genesight Wizard discloses how to receive or enter data, and save the data to the memory for use by the program and processors. The program then produces a one dimensional ordering of the data. (sorting data p63, data preparation p78, 80, chapter 7, ) The Dataset builder accesses the received data and produces the sorting or ordering based on selected characteristics. The data is split and clustered based on varying requirements,

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such as single linkage, complete linkage each of which use a single aspect of the data (chapters 7-9, confidence and significance windows, etc. k-means clustering, SOM clustering, hierarchical clustering, PCA plotting). After the splitting of the data, a dendrogram is generated and displayed. The ordered data, or selected data can also be output. (Chapter 10, generating reports) This document discloses use of self organizing maps to cluster the data at p159, Appendix C. Principal component analysis module of the data at Chapter 10, and Appendix D. As such, this anticipates the rejected claims.

Claims 1, 3-4, 6-7, 10, 12-13, 15-16, 19, 21-22, 24-25, 27-28, 30-31, 33-34, 36-37, 39-40, 42, 43 and 45 are rejected under 35 U.S.C. 102(a) as being anticipated by Genesight, 3.0, 3.1, 8/31/01, Reference CC, PTO-1449).

Genesight, 2001 (version 3.0 or 3.1, published 8/31/01 according to the response to the requirement for information) discloses an apparatus, program product and method for analyzing gene data. The response to the requirement for information sets forth that this document discloses the invention. This document does not list any authors or inventors, and as such, is by a differing inventive entity or "by others." Applicant lists the publication date/ release date of this version as 8/31/01. The instant application has a filing date of 3/5/02. This system, program and method provide the following means and or steps. Data is received (chapters 5-6) and the data has various characteristics, such as signal value, name, etc, The Genesight Wizard discloses how to receive or enter data, and save the data to the memory for use by the program and processors. The program then produces a one dimensional ordering of the data. (sorting data p69, data preparation p86, chapter 8, ) The Dataset builder accesses the received data and produces the sorting or ordering based on selected characteristics. The data is split and clustered based on varying requirements, such as single linkage, complete linkage each of which use a single aspect of the data (chapters 8-10, confidence and significance windows, etc. k-means clustering, SOM clustering, hierarchical clustering, PCA plotting). After the splitting of the data, a dendrogram is generated and displayed. The ordered data, or selected data can also be output. (Chapter 11, generating reports) This document discloses use of self organizing maps to cluster the data at Appendix C. Principal component analysis module of the data at Appendix D. As such, this anticipates the rejected claims.



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***Conclusion***

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary K Zeman whose telephone number is (571) 272 0723

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, PhD can be reached on (571) 272 0718. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

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MARY K. ZEMAN  
PRIMARY EXAMINER

10/16/31  
2/16/06

Continuation of Disposition of Claims: Claims rejected are

1,3,4,6,7,9,10,12,13,15,16,18,19,21,22,24,25,27,28,30,31,33,34,36,37,39,40,42,43 and 45.

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Eisen.pdf	794 KB	8/3/05
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3 file(s)  
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